

B.Sc. (With Credits)-Regular-Semester 2012 Sem V
B.Sc. 3504 - Biotechnology : Paper-I (Genetic Engineering)

P. Pages : 2

Time : Three Hours



GUG/W/16/3354

Max. Marks : 50

Notes : 1. All questions are compulsory and carry equal marks.

1. Describe mechanism and applications of PCR. 10

OR

What is plasmid and explain pBR322 and YAC. 10

2. Explain Lipofection, microinjection and particle gun method for insertion of r DNA into host cells. 10

OR

Describe in detail production of monoclonal antibodies. 10

3. a) Explain types of Restriction enzyme. 2½

b) Write about BAC. 2½

c) Explain DEAE – dextran mediated transformation. 2½

d) Describe DNA finger printing Technique. 2½

OR

e) Explain the role of r DNA technology in disease diagnosis. 2½

f) What is phagemid vector? Describe briefly. 2½

g) What are linkers and adapter in r – DNA. 2½

h) Describe interferon production. 2½

4. a) What are the applications of r DNA technology. 2½

b) What is cosmid vector? Explain. 2½

c) What is screening? Explain any one method of screening. 2½

d) Explain Genetic counselling. 2½

OR

- e) Explain Genomic library. 2½
- f) Describe Bacteriophage vector. 2½
- g) Explain Transformation. 2½
- h) Explain antenatal diagnosis. 2½

5. Attempt any ten.

- a) Define genome. 1
- b) What is the use of alkaline phosphatase. 1
- c) Define Genetics. 1
- d) What is BAC. 1
- e) What is plasmid. 1
- f) Write two character of pUC18 1
- g) What is cloning? 1
- h) What is micro injection? 1
- i) What is lipofection? 1
- j) Define gene therapy. 1
- k) Define interferon. 1
- l) What is somatic cell? 1
